M-AUDIO

# MICROTRACK II

Professional 2-Channel Mobile Digital Recorder




# User Guide

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# 1 — Introduction

**Congratulations on your purchase of M-Audio MicroTrack II.**

The redesigned MicroTrack II brings even more professional features to the original high-fidelity mobile digital recorder that's been embraced by audio and film professionals worldwide. With an extended input gain range, analog input limiter, 48V phantom power, faster file transfer rate and other enhancements, MicroTrack II delivers the highest quality mobile recording experience available today. Record WAV files, WAV files with embedded Broadcast Wave Format data and MP3 files to CompactFlash (CF) cards or Microdrives through balanced line inputs or built-in microphone preamps. Then drag and drop recordings to your computer via high-speed USB 2.0 for immediate editing or Web posting. MicroTrack II is perfect for a wide variety of applications including field recording, capturing live shows, songwriting, education and more.

MicroTrack II takes your mobile recording experience to the next stage. Drop in markers* while recording WAV files and easily find your place when editing your content. Organize and locate your files in the field with a user-created folder structure. Overcome the limitations of the FAT32 file system and create virtually seamless WAV file** recordings beyond 2GB in size. Dim the backlight to save battery life and be discreet in a dark room. Add a USB-compatible battery pack (sold separately) and capture extra-long sessions. Let the recorder hibernate, then wake it up to record on a moment's notice. With MicroTrack II, you're always ready to go.

Even with its long list of features, MicroTrack II remains simple to use. However, we still suggest that you read through this entire User Guide to familiarize yourself with all the functions contained within this portable unit.

**Markers follow the Broadcast Wave Format (BWF) standard. BWF files are files stored in WAV format, containing additional embedded data beyond basic WAV audio information, such as position markers. The audio software you are using on your computer must be capable of reading BWF information to take advantage of this feature. If your software does not recognize BWF data, the file will be treated as a standard WAV file and the markers will be ignored.*

*** When recording an MP3 file, the recording will stop when a 2GB file size is reached, and the recorded 2GB MP3 will be saved.*

## What's in the Box

- MicroTrack II unit
- USB cable
- stereo "T" microphone
- 1/8" female to 1/8" male extension cable with plastic lapel clip
- earbuds
- protective bag
- USB power supply
- printed Quick Start Guide
- CD-ROM containing this User Guide, test tones, and Audacity editing software

## Product Features

- records stereo WAV, BWF, and MP3 files
- 16-bit or 24-bit recording and playback
- analog input limiter
- supports common sample rates from 44.1kHz to 96kHz
- built-in rechargeable battery †
- back-lit LCD display
- 2 x 1/4” TRS mic/line inputs with 48V phantom power
- 1 x 1/8” stereo mic input capable of providing 5V power for electret microphones
- 1 x 1/8” headphone output
- 2 x RCA line outputs
- 1 x S/PDIF input
- 1 x USB connector
- uses CompactFlash cards or Microdrives (64MB minimum)

*† Battery life is dependent on the usage scenario. For example, a stereo recording from two condenser mics with phantom power switched on will deplete the battery quicker than just listening to audio playback.*

## Minimum System Requirements

### PC:

- Windows XP (SP2) †† or Windows Vista
- Available USB port
- CompactFlash card or Microdrive

*†† Home and Professional Edition only. Windows Media Center Edition is not currently supported.*

### Mac:

- Mac OS X 10.2.8
- Available USB port
- CompactFlash card or Microdrive

# 2 - Setup and Charging

## Connecting to a Computer

No drivers are required. MicroTrack II is class compliant, meaning you do not need to install any special drivers when connecting MicroTrack II to your computer.

## Charging the Battery with the USB Power Supply

The MicroTrack II built-in battery ships with only a minimal charge and you must charge it from a power source (your computer's USB connection or the included power supply) before you can use it.

It is essential that you fully charge the MicroTrack II battery before using your new recorder. **Failure to fully charge the battery before first use can limit the capacity of the battery, lowering the total recording time of MicroTrack II.**

*To charge the battery, follow the steps below:*

- Plug the smaller end of the supplied USB cable into the USB connector on the bottom of MicroTrack II.
- Plug the large end of the USB cable into the supplied USB power supply.
- Plug the USB power supply into a power outlet.
- An animated battery symbol will be displayed in the right upper corner of the LCD on MicroTrack II to indicate that the device is being charged.
- When the battery is fully charged, the animation will stop, the battery symbol will appear solid, and a check mark will be displayed next to the battery symbol, indicating that the charging process has finished.
- You can now disconnect MicroTrack II from the USB cable.

You will have to recharge the battery from time to time as you use the device. There is a battery meter icon in the upper-right corner of the MicroTrack II screen that shows the estimated battery power remaining. When the battery power is nearly depleted, "battery low" will be shown on the LCD display. When this message appears, you should recharge MicroTrack II immediately. If you continue to run MicroTrack II on battery power after seeing this message, the unit will eventually turn off. You will then have to recharge the battery before MicroTrack II can be turned on again.

If you recharge the battery before the unit becomes inoperable, the charge time will be approximately 2.5 hours. If you drain the battery to a point where MicroTrack II will no longer turn on, a full charge can take approximately 6.5 hours.

## Power Saving (Hibernation Mode)

When MicroTrack II is on, not plugged into a power source, and has been inactive for 10 minutes, it will enter hibernation mode. This feature will turn off all non-essential components to minimize power consumption and maintain battery life. A brief press of the power key will instantly return the device to the last state it was in before hibernation, allowing you to start a new recording immediately. If the battery drains completely while in hibernation mode, MicroTrack II will save its preferences before powering itself off.

## Formatting the Recording Media

MicroTrack II records directly to CF cards or Microdrives. In both cases, these mediums must be formatted before they can be used. MicroTrack II can format media with the following procedure:

> ► ***NOTE**: Formatting a CF card or Microdrive will erase all of its data. Thus, formatting can be used as a method for deleting the entire contents of a card or drive.*

### Formatting Using MicroTrack II

1. Turn on MicroTrack II.
2. Insert your media, either a CF card or Microdrive, into MicroTrack II. The unit will reboot.
3. After MicroTrack II has rebooted, press down on the [NAV] wheel until “System” is selected, then press in on the [NAV] wheel.
4. Press down on the [NAV] wheel until “Format Media” is selected, then press in on the [NAV] wheel.
5. When prompted with a confirmation message, press the [NAV] wheel again.
6. MicroTrack II will restart after the formatting process has completed.

*You can also use your computer to format your MicroTrack II CF card or Microdrive. See Chapter 5, “Using MicroTrack II with a Computer” for more information.*

## 3 - Hardware Controls and Indicators

### Front




1. **Power Button ⏻ :** Press and hold this button for approximately one second to turn MicroTrack II on and off. Pressing and holding this button for approximately ten seconds forces MicroTrack II to shutdown, should the unit ever become unresponsive
2. **LCD Display:** This shows the current status of MicroTrack II.
3. **Clip Indicators:** These LEDs will light when an input signal exceeds -1dB.
4. **Input Levels Adjust (LEVELS):** These control the individual recording levels of the MicroTrack II left and right inputs. The current input level setting is represented by triangles in the L/R level meters on the main screen.
5. **Signal Indicators:** These LEDs will light when a signal greater than -40dB is detected at the selected input.
6. **Delete Button (DEL):** In normal player/recorder operation, the delete button deletes the current (or selected) audio file. The delete button is also used to stop the MicroTrack II USB drive mode (known as "host mode") and return to normal player/recorder functionality.
7. **Output Level Adjust (VOLUME):** This controls the output volume of MicroTrack II.
8. **Record Button (REC):** This button is used to start and stop recordings.

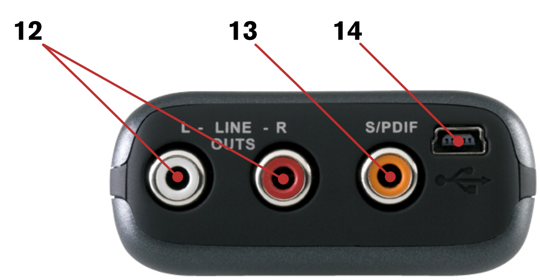
### Top

9. **Stereo Mic Input Jack (MIC):** This 1/8" stereo jack is used for connecting a mono or stereo microphone. This input is capable of providing 5V power for electret microphones.
10. **Mic/Line Input Jacks (MIC/LINE):** These 1/4" TRS jacks accept microphone and line-level signals.
11. **Headphone Jack 🎧 :** Connect a pair of headphones with an 1/8" plug for monitoring.




### Bottom

12. **RCA Outputs (L-LINE-R OUTS):** These are line-level outputs from MicroTrack II.
13. **S/PDIF Input (S/PDIF):** This allows digital signals in S/PDIF format to be recorded by MicroTrack II.
14. **USB Input:** Connect MicroTrack II to a host computer or to the included USB power supply using this input. This will also charge the MicroTrack II battery when connected.



## Left

15. **Menu Button (MENU):** This button toggles between the Main Menu and record screen, or acts as an exit button when in a sub menu. Pressing this button while recording a WAV file will write a location Marker in Broadcast Wave Format (BWF) at the current position.

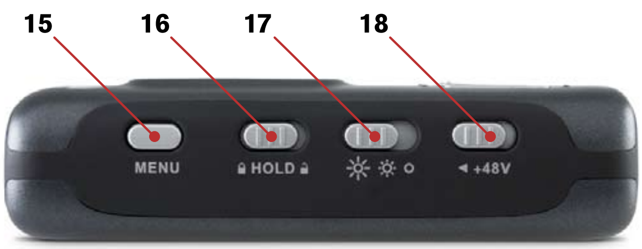
16. **Hold Switch (HOLD):** When active, all buttons on MicroTrack II will be disabled. If you attempt to operate MicroTrack II while the Hold switch is on, "HOLD switch is on" will be shown on the LCD display.

17. **Dimmer Switch ☼ ☼ ○ :** This is a three-position slide switch that controls the brightness of both the LCD backlight and the LED indicators on the front panel. The three positions are Full, Dim, and Off.

   ► ***NOTE**: If the backlight has been turned off in the Options menu, this switch will only control the brightness of the front-panel LEDs.*

18. **Phantom Power Switch (+48V):** This switches on the phantom power for the 1⁄4" TRS inputs. When active, "48V" will be will be shown on the LCD display. Phantom power should only be used with condenser microphones.

   ► ***IMPORTANT**: Phantom power should be disengaged when connecting or disconnecting microphones to prevent possible damage to the microphone's internal electronics.*




## Right

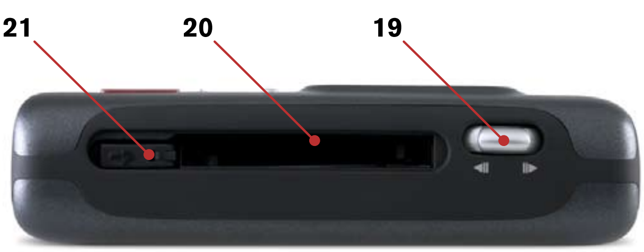
19. **[NAV] Wheel:** This is a multi-function control that is dependent on the current screen you are viewing.

    a. In a menu, pushing up or down navigates the selections on the screen, and pressing in selects the current function.

    b. In the main playback screen, pressing in toggles between play and pause. Pushing down or up will skip ahead or backwards through the songs in the current folder. Holding down or up will fast-forward or rewind the current song.

20. **Memory Slot:** Insert a CF card or Microdrive here.

21. **Eject Button:** This button folds flat into the housing of MicroTrack II to prevent it from breaking or being pressed accidentally. (The hinge is on the Memory Slot side.) Flip this button out and press it to remove the CF card and/or Microdrive.



## Main Menu

Pressing the [MENU] button will display a list of menu categories (the Main Menu) on the MicroTrack II display. You can then push up and down on the [NAV] wheel to move through the selections (the selected menu item will be shown in bold print). Pressing in on the [NAV] wheel will activate the current selection or enter a sub-menu. The [MENU] button is used to exit a sub-menu.

When first entering the Settings menu, you will be presented with the following options, each explained in detail in the following sections:

1. **Files:** This will present a list of all stored files and folders. You can choose a file to play or delete from this list.
2. **Record Settings:** This is used to set the recording parameters for MicroTrack II.
3. **Options:** This contains display, playback, and button-function options for the Microtrack II.
4. **System:** This provides access to advanced features and settings of MicroTrack II.

## Files Menu

This menu displays a list of all the folders and files contained on the current CF card or Microdrive.

- Press up and down on the [NAV] wheel to move the selection up and down through this list.
- To open a folder, select it and press in on the [NAV] wheel.
- To exit a folder, press the [MENU] button.
- To play a file, select it and press in on the [NAV] wheel.
- To delete a file, select it and press the [DEL] button.

## Record Settings Menu

This menu lets you determine the recording input, format, and resolution for subsequent audio recordings. Changing these settings will have no effect on any of the files currently stored in memory. This menu will show a list of parameters with their values after them. To change the values, first select the parameter by pressing up or down on the [NAV] wheel. Then press in on the [NAV] wheel to confirm your selection. Once selected, pressing up or down on the [NAV] wheel will change the value of the parameter. Once the desired value is shown, press in on the [NAV] wheel to confirm and return to the previous menu. The options in this menu are as follows:

- **Input Source**: This is where you select which input of MicroTrack II to use for recording.
  - **1/8”** Chooses the 1/8” mic input as the recording source.
  - **1/4” TRS** Chooses the 1/4” TRS jacks as the recording source.
  - **S/PDIF** Selects the S/PDIF digital input as the recording source. When S/PDIF is selected, the [LEVELS] buttons have no effect.
- **Input Monitor**: Input Monitoring is the ability to listen to the incoming audio signal while recording is in progress. This signal will be heard at the headphone and RCA outputs.
  - **On** Turns Input Monitoring on.
  - **Off** Turns Input Monitoring off.

- **Rec Time Available**: This is not an adjustable parameter–it merely shows the space available on the media in MicroTrack II. When you select this option, it may take a moment to calculate the available time and display it on the screen. This information is provided to help you verify you will have enough recording space before recording, and make a choice of which recording parameters to use. If you see that you're getting low on CF card or Microdrive space, you can choose to use MP3 encoding instead of WAV to yield recordings with smaller file sizes. Keep in mind that this feature only accounts for recording space when determining record time–it does not account for battery life.
- **Encoder:**

  **WAV** Chooses WAV as the recording format. This format is uncompressed and will yield the highest quality recordings. Be aware that the files created in this format can be quite large. Also select this option to create BWF compatible files with position markers.

  **MP3** Selects MP3 as the recording format. This format compresses the audio data to yield smaller file sizes.

- **Sample Rate**: The options available in this menu will depend on the Encoder selected above. Keep in mind that file sizes will increase as the sample rate is increased.
  - **Options (WAV):**

    44.1 / 48 / 88.2 / 96: These are the available sample rates when WAV is selected as the Encoder.

    > ***Tip:***
    > *44.1 kHz: This is the standard Audio CD sample rate.*
    > *96 kHz: This yields the best sound quality by improving high frequency response.*

  - **Options (MP3):**

    44.1 / 48: These are the available sample rates when MP3 has been selected as the Encoder.

- **Bits**: Like Sample Rate, the options shown in this menu will depend on the Encoder selected above. Keep in mind that file sizes will increase as this setting is increased.
  - **Options (WAV):**

    16 / 24: When WAV is selected as the Encoder, this menu allows you to set the bit-depth of your recording.

    > ***Tip:***
    > *16-bit WAV: This is the standard audio CD bit depth.*
    > *24-bit WAV: This yields the best sound quality by maximizing the dynamic range.*

  - **Options (MP3):**

    96 / 112 / 120 / 160 / 192 / 224 / 320: When MP3 is selected as the Encoder, this value will determine the bit-rate of the file.

    > ***Tip:***
    > *96kbps MP3: This will effectively capture voice dictations.*
    > *160kbps MP3: This offers reasonable quality for popular music.*

- **Channels**:
  - **Stereo**: The Stereo option causes MicroTrack II to record both the left and right inputs into a stereo file. This is the default setting for MicroTrack II.
  - **Mono**: This option causes MicroTrack II to record only the left channel of audio instead of both.
- **Link L+R Gain**: This is a simple on/off menu selection. When this option is set to on, the recording levels of inputs L and R will be matched. If you use the left or right [LEVEL] buttons to adjust the recording level of one of the inputs, the other input will automatically be matched to the same level. This is especially useful when making stereo recordings as this setting will preserve the stereo image. When this option is turned off, the input levels of the channels will become independent.
- **Limiter**: This option can be enabled (On) or bypassed (Off). When enabled, the analog input limiter prevents digital distortion (clipping) in your recordings, which comes in handy when recording sources with a wide dynamic range, such as drums or a gunshot. The limiter will ensure that the initial attack (transient) of these sounds does not exceed the headroom of MicroTrack II. The analog limiter attenuates signal peaks above -1dBFS before they are converted to digital. This gives MicroTrack II greater gain-reduction capabilities than the digital limiters found in other recorders. Also, while not intended to replace proper input level settings, the limiter can be helpful when recording with little or no time to set input levels. If your recording levels are higher than they should be, the limiter will ensure that you get a clip-free recording.

## Options Menu

### Backlight

This menu sets the automatic shutoff time for the MicroTrack II backlight. Since the backlight drains more battery power, you have the ability to automatically turn the light off to maximize your battery life.

When set to "Always off," the backlight will never turn on. When "Always on" is selected, the back light will be on whenever MicroTrack II is powered on. The other three settings available on this menu determine the amount of time the backlight will stay on after the last control is pressed on MicroTrack II. For example, if "5 sec" is selected, the backlight will turn on any time a button is pressed on MicroTrack II. The back light will then turn off 5 seconds after the last button is pressed.

► ***NOTE:*** *If the dimmer switch on the side of MicroTrack II is set to the Off position, the backlight will never turn on no matter what setting is selected in this menu.*

### Contrast

This setting adjusts the contrast of the MicroTrack II display. Press up or down on the [NAV] wheel to adjust this value. Higher values result in a darker display. Press in on the [NAV] wheel when finished.

### Playback EQ

This menu provides access to the six EQ curves built into MicroTrack II. These curves affect playback only—all recordings are made without EQ. To activate an EQ preset, use the [NAV] wheel to select the curve, then press in to activate it. The EQ has the following settings:

1. **Normal:** This defeats the EQ and provides flat playback response.
2. **Bass Boost:** Increases the low frequencies during playback.
3. **Bass Reduce:** Decreases the low frequencies during playback.
4. **Treble Boost:** Increases the high frequencies during playback.
5. **Treble Reduce:** Decreases the high frequencies during playback.
6. **Bass and Treble Boost:** Increases both the low and high frequencies during playback.

### Scrub Audio

This is an on/off setting that allows you to hear audio as you rewind and fast-forward through an audio file. When set to on, you will be able to hear bits of the file as you seek. When off, MicroTrack II will be silent while seeking.

### Rec Time Display

This option dictates how MicroTrack II computes the remaining recording time that is shown on the LCD Display in the Record and Record Pause States.

CF cards and Microdrives with a capacity of more than 512 MB use the FAT 32 file system. This file system has an inherent 2GB limit on file size. Thus, MicroTrack II may show a shorter record time available, even if there are more than 2GB available on the CF media. The Rec Time Display settings are:

- **Time until 2GB:** This setting will compute the remaining recording time available based on a 2GB size (or the currently available space on the CF media if less than 2GB).
- **Time on Media**: This setting will compute the total available recording time remaining based on the free space on the CF media.

When recording WAV files, MicroTrack II helps circumvent the 2GB file size limitation by automatically creating an additional WAV file once the 2GB limit has been reached and continuing to record to the new file. This ensures that you can record for a long period of time and the overall capacity of the media becomes the time limit. When recording an MP3 file, the recording will stop when a 2GB file size is reached, and the recorded 2GB MP3 will be saved.

### Record Button

This option will set the behavior of the Record Button. The settings are:

- **Record**: This setting causes MicroTrack II to enter the Record State when the Record button is pressed.
- **Record/Pause**: This setting causes MicroTrack II to enter the Record Pause State when the Record button is pressed. This allows the user to set recording levels before starting to record.

*Pressing the Record button a second time, or pushing in on the [NAV] wheel starts the actual recording.*

### Verify Delete

This is a simple on/off menu preference that enables or disables the delete confirmation message. When this feature is on, you will be asked to confirm a file delete any time you press the [DEL] key. This helps prevent accidental erasure of files you wish to keep. When this feature is off, files will be deleted as soon as the [DEL] button is pressed.

## System Menu

### Connect to PC

This menu option is used to place your MicroTrack II in "host mode," effectively turning MicroTrack II into a USB Compact Flash card reader. This allows quick and easy transfer of audio and firmware files between your computer and MicroTrack II.

While MicroTrack II is in host mode, it cannot play or record audio files. The screen will simply display the "M-Audio" logo and USB icon to indicate it is in host mode.

- ***CAUTION:*** *It is suggested that you close the connection from the computer BEFORE disconnecting the MicroTrack II USB cable or exiting host mode on MicroTrack II. If you fail to do this, there is a slight chance that information on the CF card might get corrupted. Refer to the section entitled "Disconnecting MicroTrack II from Your Computer" for instructions how to unmount and disconnect your MicroTrack II from Windows and Macintosh OS X computers.*

**To enter host mode:**

1. Connect a USB cable from the computer to MicroTrack II.
2. Select "Connect to PC" from the "System" menu. The "M-Audio" logo will appear on the screen to indicate that MicroTrack II is in host mode.

**Another method to enter host mode:**

1. Turn off MicroTrack II.
2. Connect a USB cable from the computer to MicroTrack II. MicroTrack II will automatically power up and enter host mode. The "M-Audio" logo will appear on the screen to indicate it is in host mode.

### Format Media

This menu allows you to format the inserted CF or Microdrive media. It is necessary to format your media before you can begin recording. Be aware that formatting a medium will erase any data it contains. Because of this, formatting can be used as a quick way to delete all files on the CF or Microdrive media.

1. Select "Format Media" from the System Menu and press in on the [NAV] wheel.
2. You'll see the message "Press NAV switch to format media or MENU to cancel." Press the [NAV] wheel to begin the formatting process.
3. MicroTrack II will restart after the formatting process has completed.

### Test Media

This operation will perform a test on the removable media to determine its capabilities. At the end of the test, the LCD display will show information indicating bit-rate and sample rate options for recordings (slower cards may not be able to write the necessary data for high bit and high sample rates in time).

### Firmware Update

From time to time, M-Audio may release updates to the operating system for MicroTrack II. Directions for using this feature to update the firmware will be included with the update files you download from the M-Audio website (www.m-audio.com).

### Factory Defaults

Entering this menu option will allow you to reset all of the internal settings of MicroTrack II to their original factory defaults. (This also resets the internal counter for file names, so the next file you record will attempt to be "File0001.wav".) Press in on the [NAV] wheel to restore the defaults. If you want to cancel this operation, press [MENU] to exit.

### Version

This option will show the current firmware and bootloader versions. The screen will appear as follows:

*Version*

*Resource File – z.z.z*

*Firmware – x.x.x*

*Bootloader – y.y*

Pressing in on the [NAV] wheel or pressing [MENU] will return to the System menu.

### Date & Time

This option is used for setting the date and time as well as choosing the time and date format. When this option is selected, the LCD display will show the following options:

- HH MM am/pm
- MM DD YYYY
- Time [12 hour]
- Date [US]

*The [NAV] wheel will be used to select the option to edit. Pressing in on the [NAV] wheel will open an additional setting screen:*

- **Editing Time**

  When clicking on the time, a flashing box will appear around the hour. The [NAV] wheel will be used to increment or decrement the hour. When using the 12-hour display, the AM/PM display will change when incrementing past 12 (or decrementing below 1). Once set, pressing in on the [NAV] wheel will move the flashing box to the minute. The [NAV] wheel will then increment or decrement the minute. Pressing in on the [NAV] wheel will save the new time settings and the flashing box will disappear.

- **Editing Date**

  The date is displayed in three sections for Day, Month and Year. The order in which these sections are displayed depends on the selected date format (US/Europe/Japan). Pressing in on the [NAV] wheel selects the first section. Pushing the [NAV] wheel up or down allows you to change the value. Push in on the [NAV] wheel to accept the changed value and move the flashing box to the next section. Repeat this process for the second and third section. Once the third value change is accepted by pushing in on the [NAV] wheel, date edit mode is exited and the flashing box disappears.

- **Time**

  This option will allow you to select the display format for the time. It will present the following options:

  - 12 hour
  - 24 hour

- **Date**

  This option will allow you to select the display format for the date. It will present the following options:

  - US–MM DD YYYY
  - Europe–DD MM YYYY
  - Japan–YYYY MM DD

## Language

This option will select the language to use for the LCD Display. The settings are:

- English
- French
- German
- Italian
- Japanese
- Spanish
- Chinese (simplified)*

► ***Note**: MicroTrack II will display the above options in their native languages.*

***Simplified Chinese language option**

If Chinese (simplified) is not an available option on your MicroTrack II, you can add this functionality by downloading and installing the most recent firmware update from the M-Audio website (www.m-audio.com).

*To locate the updated firmware file:*

1. Click "Support" on the navigation bar on the main M-Audio webpage.
2. Click "Drivers & Updates."
3. In the Drivers and Software Search window,

   a) select "MicroTrack" in the first column,

   b) select "MicroTrack II" in the second column,

   c) select your operating system in the third column.
4. A list of available firmware downloads will appear in the lower portion of the screen. Click on the latest version and follow the instructions for download.
5. Once downloaded, follow the "Firmware Update" instructions included with the downloaded firmware.

## About

Choosing this option will display legal information such as copyright and licensing notices. Press in on [NAV] or press [MENU] to exit back to the System menu.

## 4 - Operating Instructions

MicroTrack II is an easy-to-use, portable audio recorder. Its primary function is to create high-quality recordings that can be transferred easily to a computer. As such, the steps for operating MicroTrack II are few and simple to understand. In essence, MicroTrack II has two functions: recording audio files and playing audio files. Because a file needs to be recorded before it can be played back, we will explain the recording process first, followed by playback and file management functions.

### Recording

To begin recording a new audio file, connect an audio source to MicroTrack II, select the proper input source, select your recording format and resolution, adjust your recording levels, then initiate the recording. MicroTrack II will automatically assign a name to the file in the format "FILExxxx.eee" where xxxx is a number from 0001 to 9999 and eee is either "wav" or "mp3." The procedure is outlined below:

1 Using the [+48] switch on the side of MicroTrack II, turn off phantom power.
2. Turn down the input gain of MicroTrack using the [LEVELS] buttons on the front panel.
3. Connect an audio source to MicroTrack II. This can be any one of the following:
   - a mono or stereo dynamic, or electret microphone connected to the 1/8" input.
   - one or two professional microphones to the 1/4" TRS inputs. Because most professional microphones have XLR connectors, you may need to use XLR-to-TRS cables or adapters to make your connections.
   - a mono or stereo line-level source to the 1/4" TRS inputs.
   - a digital source connected to the S/PDIF input.
4. Select the INPUT SOURCE of MicroTrack II. Use the [MENU] button and [NAV] wheel to select "Record Settings" > "Input Source." Select the proper input and press the [NAV] wheel in again to make your selection.
5. Select the ENCODER. Use the menu key and [NAV] wheel to select "Record Settings" > "Encoder." Select MP3 or WAV and press the [NAV] wheel in again to make your selection.
6. Select the SAMPLE RATE of MicroTrack II. Use the [MENU] button and [NAV] wheel to select "Record Settings" > "Sample Rate." Select the appropriate sample rate and press the [NAV] wheel in again to make your selection.
7. Select the BIT RATE of MicroTrack II. Use the [MENU] button and [NAV] wheel to select "Record Settings" > "Bits." Select the appropriate bit rate and press the [NAV] wheel in again to make your selection.
8. If needed, select PHANTOM POWER. If you are using condenser microphones that require phantom power, turn on the [+48V] switch on the side of MicroTrack II. Note that phantom power should be disengaged while connecting or disconnecting microphones to prevent damage to the microphone's internal electronics.
9. Enable INPUT MONITORING. This will allow you to hear incoming signal on the RCA and 1/8" audio outputs while MicroTrack II is recording or is in the Record Pause State. This option is enabled by default, but you can manually adjust it by using the [MENU] button and the [NAV] wheel to select "Record Settings" > "Input Monitor." Select "On" and press in on the [NAV] wheel to activate.

10. Set input levels appropriately for this source.
    - Press [REC]. At this point, MicroTrack II will either begin to record a file, or will enter the Record Pause State, depending on the Record Button setting found in the Options menu. (See the Record Button section of the Options Menu portion of this User Guide for further information this settings.) Now play the loudest sound you wish to record. If a file is being recorded, you will be able to delete the file as soon as you are done, if you wish.
    - Use the [LEVELS] controls on the surface of MicroTrack II to adjust the input level so that it is as high as possible without peaking. The input level settings are represented as triangles in the level meters on the main screen.
    - To stop recording, press [REC] again. If you have recorded a file (once again, depending on the Record Button setting) you may immediately delete the file, press [DEL].
11. Once the recording levels and parameters are set, you may begin recording. Press the [REC] button to start recording a new file.
12. While a file is recording, you can:
    - Make adjustments to the recording levels if necessary, using the [LEVELS] buttons.
    - Pause the recording by pushing in on the [NAV] wheel once. To resume recording, push in on the [NAV] wheel again.
    - Stop the recording by pressing the [REC] button again.
    - Delete the file being recorded by pressing the [DEL] button.
13. Once the recording is stopped, MicroTrack II will finish writing the file to memory. If you are recording a WAV file, and your recording exceeds the 2GB file size limit of CF or Microdrive media, an additional file will automatically be created with virtually no time lost between files. When recording an MP3 file, the recording will stop when a 2GB file size is reached, and the recorded 2GB MP3 will be saved.

    Adding Markers to a WAV Recording: If the [MENU] button is pressed while MicroTrack II is recording a WAV file, the Record icon will change from solid to outline for 0.5 seconds and a marker will be dropped at that location in the WAV file. When imported into Pro Tools, or other audio editing programs that recognize Broadcast Wave Files (BWFs), regions or cue points will be created for each marker. If your specific audio editing program does not recognize the extra data contained in BWF files, it will still read the recorded audio as a WAV file.

► ***Note:*** *Markers follow the Broadcast Wave Format (BWF) standard. BWF files are files stored in WAV format that contain additional embedded data beyond basic WAV audio information, such as position markers. BWF files are stored with a .WAV extension. The audio software you are using on your computer must be capable of reading BWF information to take advantage of this feature. If your software does not recognize BWF data, the file will be treated as a standard WAV file and the markers will be ignored.*

*This feature is useful for journalists–they can place a marker before each question during an interview. It is also great for recording bands–markers can be placed between each song. Or, if gathering sound effects, a marker can be placed before each noise (as opposed to starting and stopping recording for each individual sound).*

► ***NOTE:*** *The [MENU] button is without function while recording in MP3 format.*

## Playback

*Now that a file has been recorded, you can play it back to check the recording.*

1. Connect the outputs of MicroTrack II so you can hear the playback. You can use any combination of the following:
   - Plug a pair of headphones into the 1/8" jack on MicroTrack II.
   - Connect the RCA outputs to an amplifier or mixer.
2. Use the [MENU] button and [NAV] wheel to navigate to the "Files" menu.
3. Use the [NAV] buttons to select a file to play. Press in on the [NAV] wheel to begin playback of the current file.
4. While an audio file is playing, you can:
   - Adjust the playback volume using the [VOLUME] button.
   - Delete the file by pressing the [DEL] button.
   - Immediately begin recording a new file by pressing the [REC] Button.
   - Loop playback of the file using the procedure explained in the Loop Playback section below.
   - Fast-forward through the file by holding the [NAV] wheel down.
   - Skip ahead to the next file by pressing down on the [NAV] wheel.
   - Return to the beginning of a file by pressing up on the [NAV] wheel. If you are within the first three seconds of a file, pressing up will skip back to the previous file.
   - Rewind the file by holding up the [NAV] wheel.
   - Pause playback by pressing in on the [NAV] wheel. Press in again to resume playback.

*Additional [NAV] wheel functions when an audio file is paused or stopped include:*

- Return to a previous file by pressing up on the [NAV] wheel.
- Resume playback by pressing in on the [NAV] wheel.

## Loop Playback

MicroTrack II will allow you to loop a section of an audio file. This can be useful when practicing parts or studying dictation. The method for looping a file requires setting a start and end point, and is accomplished as follows:

1. To engage Loop Playback, press and hold the [MENU] button for over 2 seconds while the file is playing. The loop icon will appear on the lower left of the screen.
2. Press the [MENU] button once when you reach the start point of the loop. A small "+" will appear to the left of the loop icon.
3. Press the [MENU] button a second time when you reach the end point of your loop. The section will begin to loop immediately. A small "+" will appear to the right of the loop icon.
4. Pressing the [MENU] button a third time will exit loop mode.

*While using Loop Playback mode, you can:*

- Adjust the playback volume using the [VOLUME] button.
- Delete the file by pressing the [DEL] button.
- Immediately begin recording a new file by pressing the [REC] Button.
- Fast-forward through the file by holding the [NAV] wheel down.
- Skip ahead to the next file by pressing down on the [NAV] wheel.
- Return to the beginning of a file by pressing up on the [NAV] wheel.
- Rewind the file by holding up the [NAV] wheel.
- Pause playback by pressing in on the [NAV] wheel. Press in again to resume playback.

*Additional [NAV] wheel functions when an audio file is paused in Loop Playback mode include:*

- Return to a previous file by pressing up on the [NAV] wheel.
- Resume playback by pressing in on the [NAV] wheel.

# 5 - Using MicroTrack II with a Computer

MicroTrack II will interact with a computer for multiple purposes.

- MicroTrack II will charge its battery with power it receives from the computer.
- The contents of the CF card or Microdrive can be transferred to the computer.
- Files can be uploaded from a computer to MicroTrack II.

Please refer back to the section titled "**Connect to PC**" to learn how to properly connect the device.

## Charging MicroTrack II from the Computer

MicroTrack II will automatically begin recharging the internal battery any time power is received at the MicroTrack USB port. Depending on the manufacturer of your computer, your computer may need to be powered on to provide power to the USB port. An animated battery symbol will be displayed in the right upper corner of the LCD on MicroTrack II to indicate that the device is being charged. When the battery is fully charged, the animation will stop, the battery symbol will appear solid, and a check mark will be displayed next to the battery symbol, indicating that the charging process has finished.

► ***Note:*** *If MicroTrack II is off and you connect it to the USB port of computer that is running, MicroTrack II will power up and enter host mode. It is suggested that you close the connection from the computer or exiting host mode BEFORE disconnecting the MicroTrack II USB cable.*

## Transferring Audio Files to a Computer

When connected to a computer, MicroTrack II will appear as a removable disk‡ on that computer. To transfer files from MicroTrack II, locate the removable disk icon‡ under My Computer in Windows and on the Desktop on the Mac and double-click the icon to see the stored files. Drag files from MicroTrack II to the desired destination on your computer. Your computer will then begin copying the files. To send files back to MicroTrack II, simply drag the files back into the MicroTrack II window. You can also create and delete file folders, rename files, and move them to new locations when connected to the computer. These features allow you to organize your collection of recordings with ease.

*‡The name under which MicroTrack II will appear on your computer depends on the following factors:*

- *If the CF card or Microdrive was given a name at time of formatting, or was renamed later, then that name will be displayed in Windows or Mac OS X*
- *If the CF card or Microdrive was never formatted or renamed, was formatted directly from MicroTrack II, or was not given a name at time of formatting using Windows, then it will appear as "Removable Disk" in Windows XP/Vista and as "NO NAME" in Mac OS X.*
- *If the CF card or Microdrive was formatted using Mac OS X but was not given a name at time of formatting, then it will appear as "UNTITLED" in any Operating System.*

## Using MicroTrack II as a Portable Data Drive

While MicroTrack II can only play and record WAV and MP3 files, you can store any file you wish on the CF card or Microdrive. This allows you to use MicroTrack II as a portable memory card or hard drive. Any unsupported files stored on a CF card or Microdrive will be hidden from the Files menu on MicroTrack II, but they will still be there when MicroTrack II is reconnected to a computer.

## Formatting CompactFlash cards or Microdrives using a Computer

If other removable drives or media are connected to your computer and you are unsure which removable disk represents MicroTrack II, unmount and disconnect any such drives or media from your computer before starting the formatting process. If the wrong disc is selected and formatting is initiated, all data stored on that disc will be lost.

On Windows computers, right click on the Removable Disk icon, and select Format. For media less than 512 MB, select FAT under File system.  For media greater than 512 MB, select FAT32 under File system.

On a Macintosh OS X computer, open the Disk Utility application by going to Macintosh HD > Applications > Utilities and double-clicking Disk Utility. Click the MicroTrack hard drive icon on the left side of the window, and click Erase. Select MS-DOS File System then click the Erase button in the lower right.

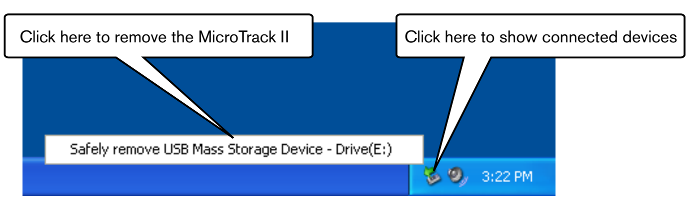
## Disconnecting MicroTrack II from Your Computer

When you want to disconnect your MicroTrack II from your computer, it is important to properly exit host mode to prevent corrupting data on the drive. This procedure only applies if MicroTrack II is currently in host mode – meaning the “M-Audio” logo and USB icon are displayed on the screen.

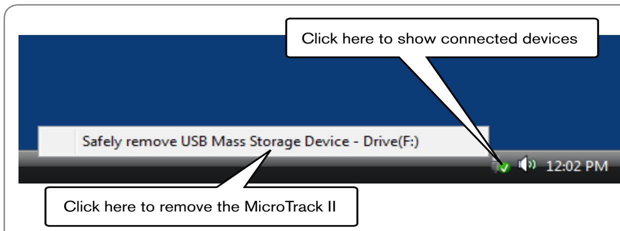
If you use the traditional shut down procedure on your computer, all drives will automatically be unmounted. If you wish to leave your computer on, follow the procedures below for Windows or Macintosh OS X.

### Disconnecting from Windows

To disconnect MicroTrack II from Windows, click on the “Safely Remove Hardware” icon located in the System Tray.




*Windows XP*



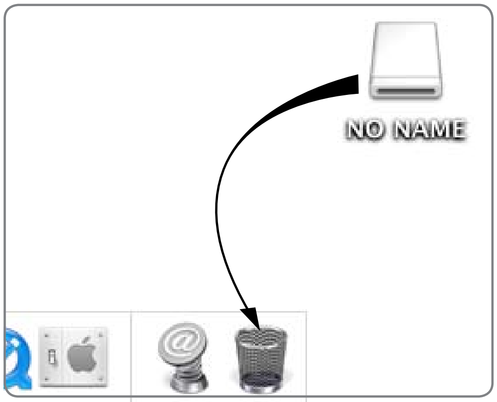

*Windows Vista*

A list of connected devices will be shown. MicroTrack II will be listed as a “USB Mass Storage Device.” Click this device and Windows will attempt to unmount MicroTrack II. Windows will only be able to unmount MicroTrack II if there are no programs trying to use files contained on the CF media. If Windows says that it cannot remove MicroTrack II, quit your running programs and try again. Once MicroTrack II has been unmounted, you can press its [DEL] key to exit host mode and return to normal operation.

### Disconnecting from Mac OS X

To disconnect MicroTrack II from Mac OS X, simply drag the MicroTrack II hard drive icon 

on your desktop to the trash can. When dragging the hard drive icon to the Trash, the Trash icon will change to an Eject symbol, and will be labeled "Eject." MicroTrack II can safely be unplugged as soon as the hard drive icon disappears .




## Swapping CompactFlash or Microdrive Media

If you wish to change out the CompactFlash card or Microdrive while MicroTrack II is connected to the computer, you will have to disconnect MicroTrack II using the procedure above before changing out the media. Once you've changed the media, you can reconnect MicroTrack II to the computer.

# 6 - Warranty Terms and Registration

## Warranty Terms

M-Audio warrants products to be free from defects in materials and workmanship, under normal use and provided that the product is owned by the original, registered user. Visit www.m-audio.com/warranty for terms and limitations applying to your specific product.

## Warranty Registration

Thank you for registering your new M-Audio product. Doing so immediately both entitles you to full warranty coverage and helps MAudio develop and manufacture the finest quality products available. Register online at www.m-audio.com/register to receive FREE product updates and for the chance to win FREE M-Audio gear.

M-AUDIO MicroTrack II
Tested to comply with FCC standards
FOR HOME OR STUDIO USE

**WARNING**: This product contains chemicals, including lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. ***Wash hands after handling.***



*PORTALPLAYER*

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# 7 - Appendix

## Recording Time vs. Media Chart

| MP3 Recording Time in Seconds | | | | | | |
|---|---|---|---|---|---|---|
| **Bit Rate / Media Capacity (MB)** | **96000** | **128000** | **160000** | **192000** | **224000** | **320000** |
| **64** | 5592 | 4194 | 3355 | 2796 | 2397 | 1678 |
| **128** | 11185 | 8389 | 6711 | 5592 | 4793 | 3355 |
| **256** | 22370 | 16777 | 13422 | 11185 | 9587 | 6711 |
| **512** | 44739 | 33554 | 26844 | 22370 | 19174 | 13422 |
| **1024** | 89478 | 67109 | 53687 | 44739 | 38348 | 26844 |
| **2048** | 178957 | 134218 | 107374 | 89478 | 76696 | 53687 |
| **4096** | 357914 | 268435 | 214748 | 178957 | 153392 | 107374 |
| **6144** | 536871 | 402653 | 322123 | 268435 | 230088 | 161061 |
| **8192** | 715828 | 536871 | 429497 | 357914 | 306783 | 214748 |

| MP3 Recording Time in [Days]:H:M:S | | | | | | |
|---|---|---|---|---|---|---|
| **Bit Rate / Media Capacity (MB)** | **96000** | **128000** | **160000** | **192000** | **224000** | **320000** |
| **64** | [0]:1:33:12 | [0]:1:9:54 | [0]:0:55:55 | [0]:0:46:36 | [0]:0:39:57 | [0]:0:27:58 |
| **128** | [0]:3:6:25 | [0]:2:19:49 | [0]:1:51:51 | [0]:1:33:12 | [0]:1:19:53 | [0]:0:55:55 |
| **256** | [0]:6:12:50 | [0]:4:39:37 | [0]:3:43:42 | [0]:3:6:25 | [0]:2:39:47 | [0]:1:51:51 |
| **512** | [0]:12:25:39 | [0]:9:19:14 | [0]:7:27:24 | [0]:6:12:50 | [0]:5:19:34 | [0]:3:43:42 |
| **1024** | [1]:0:51:18 | [0]:18:38:29 | [0]:14:54:47 | [0]:12:25:39 | [0]:10:39:8 | [0]:7:27:24 |
| **2048** | [2]:1:42:37 | [1]:13:16:58 | [1]:5:49:34 | [1]:0:51:18 | [0]:21:18:16 | [0]:14:54:47 |
| **4096** | [4]:3:25:14 | [3]:2:33:55 | [2]:11:39:8 | [2]:1:42:37 | [1]:18:36:32 | [1]:5:49:34 |
| **6144** | [6]:5:7:51 | [4]:15:50:53 | [3]:17:28:43 | [3]:2:33:55 | [2]:15:54:48 | [1]:20:44:21 |
| **8192** | [8]:6:50:28 | [6]:5:7:51 | [4]:23:18:17 | [4]:3:25:14 | [3]:13:13:3 | [2]:11:39:8 |

## Recording Time vs. Media Chart (continued)

| WAV Recording Time in Seconds | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Media Capacity (MB) / sample rate/ bit-width | 44100/16 | 48000/16 | 88200/16 | 96000/16 | 44100/24 | 48000/24 | 88200/24 | 96000/24 |
| **64** | 380 | 350 | 190 | 175 | 254 | 233 | 127 | 117 |
| **128** | 761 | 699 | 380 | 350 | 507 | 466 | 254 | 233 |
| **256** | 1522 | 1398 | 761 | 699 | 1014 | 932 | 507 | 466 |
| **512** | 3043 | 2796 | 1522 | 1398 | 2029 | 1864 | 1014 | 932 |
| **1024** | 6087 | 5592 | 3043 | 2796 | 4058 | 3728 | 2029 | 1864 |
| **2048** | 12174 | 11185 | 6087 | 5592 | 8116 | 7457 | 4058 | 3728 |
| **4096** | 24348 | 22370 | 12174 | 11185 | 16232 | 14913 | 8116 | 7457 |
| **6144** | 36522 | 33554 | 18261 | 16777 | 24348 | 22370 | 12174 | 11185 |
| **8192** | 48696 | 44739 | 24348 | 22370 | 32464 | 29826 | 16232 | 14913 |

| WAV Recording Time in Seconds | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Media Capacity (MB) / sample rate/ bit-width | 44100/16 | 48000/16 | 88200/16 | 96000/16 | 44100/24 | 48000/24 | 88200/24 | 96000/24 |
| **64** | 0:6:20 | 0:5:50 | 0:3:10 | 0:2:55 | 0:4:14 | 0:3:53 | 0:2:7 | 0:1:57 |
| **128** | 0:12:41 | 0:11:39 | 0:6:20 | 0:5:50 | 0:8:27 | 0:7:46 | 0:4:14 | 0:3:53 |
| **256** | 0:25:22 | 0:23:18 | 0:12:41 | 0:11:39 | 0:16:54 | 0:15:32 | 0:8:27 | 0:7:46 |
| **512** | 0:50:43 | 0:46:36 | 0:25:22 | 0:23:18 | 0:33:49 | 0:31:4 | 0:16:54 | 0:15:32 |
| **1024** | 1:41:27 | 1:33:12 | 0:50:43 | 0:46:36 | 1:7:38 | 1:2:8 | 0:33:49 | 0:31:4 |
| **2048** | 3:22:54 | 3:6:25 | 1:41:27 | 1:33:12 | 2:15:16 | 2:4:17 | 1:7:38 | 1:2:8 |
| **4096** | 6:45:48 | 6:12:50 | 3:22:54 | 3:6:25 | 4:30:32 | 4:8:33 | 2:15:16 | 2:4:17 |
| **6144** | 10:8:42 | 9:19:14 | 5:4:21 | 4:39:37 | 6:45:48 | 6:12:50 | 3:22:54 | 3:6:25 |
| **8192** | 13:31:36 | 12:25:39 | 6:45:48 | 6:12:50 | 9:1:4 | 8:17:6 | 4:30:32 | 4:8:33 |

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